National Energy Board

Reasons for Decision

Review of the Applications for Gas Export Licences from Direct Energy Marketing Limited, Indeck Gas Supply Corporation, Shell Canada Limited and Western Gas Marketing Limited, as agent for TransCanada Pipelines Limited

GH-1-90

June 1990

Gas Exports

National Energy Board

Reasons for Decision

In the Matter of

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GH--1-90

June 1990

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Recital and Appearances

IN THE MATTER OF the National Energy Board Act and the Regulations made thereunder;

AND IN THE MATTER OF a review of the applications for gas export licences from Direct Energy Marketing Limited, Indeck Gas Supply Corporation, Shell Canada Limited and Western Gas Marketing Limited as agent for TransCanada PipeLines Limited.

HEARD at Calgary, Alberta on 23, 24, and 25 April 1990.

BEFORE:

D.B. Smith	Presiding Member
W.G. Stewart	Member
C. Bélanger	Member

APPEARANCES:

J.T. Brett	Direct Energy Marketing Limited
K.F. Miller	Indeck Gas Supply Corporation
I..A Blue, Q.C. D. O'Leary	Niagara Mohawk Power Corporation
E. Decter	Shell Canada Limited
M.G. Samuel	Western Gas Marketing Limited as agent for TransCanada Pipelines Limited
N.W. Boutillier	Alberta & Southern Gas Co. Ltd.
W.M. Moreland	Amoco Canada Petroleum Company Ltd.
L. Keough	Boundary Gas, Inc.
S. Carscallen	CanStates Gas Marketing
E. Decter R.L. Daileader, Jr.	Cogen Energy Technology Inc.
L. Keough	Midland Cogeneration Veneture Limited Partnership
K.L. Mayer	Pan-Alberta Gas Ltd.
J. Kowch K.J. MacDonald	ProGas Limited
J. Schatz	TransCanada Pipelines Limited

G.K Cameron	Union Gas Limited
A. Bigué	Vermong Gas Systems, Inc.
V.J. Black	Minister of Energy for Ontario
D. Bursey	National Energy Board

Chapter 1
Background

As part of the GH-1-89 proceeding, the National Energy Board ("the Board") heard the gas export licence applications of Direct Energy Marketing Limited ("Direct Energy"), Indeck Gas Supply Corporation ("Indeck"), Shell Canada Limited ("Shell") and Western Gas Marketing Limited as agent for TransCanada PipeLines Limited ("WGML/TransCanada"). These licence applications were denied. The details of the applications and the reasons for denial are described in the GH-1-89 Reasons for Decision, Volume 1 - Gas Exports.

Subsequent to the release of the GH-1-89 Decision, the Board reviewed and reappraised certain aspects of the Market-Based Procedure that it uses to consider gas export licence applications. That review was conducted pursuant to Hearing Order GHW-4-89. It led the Board to make two modifications to the Market-Based Procedure. The Board decided it would no longer use benefit-cost analysis. It also decided that it would continue to examine contracts underlying gas export applications to assure itself that they have commercial substance. In assessing contract flexibility, the Board indicated that it would generally presume that, where contracts are freely negotiated at arm's length, they are in the public as well as the private interest and that the Board would intervene only in exceptional circumstances.

The GHW-4-89 Decision was released on 15 March 1990. On 19 March 1990 the Board sent a letter to, among others, the parties of record in the GH-1-89 proceeding indicating that it was prepared to review certain past decisions as a result of the change in circumstances arising from the GHW-4-89 Decision. Specifically, the Board indicated that a review would be conducted in cases where, in the view of applicants, there was an adverse decision either an the basis of benefit cost-analysis or on the basis of insufficient contractual flexibility to allow adjustments to reflect changing market conditions. The Board also stated that, in cases where supply was cited as a reason for denial of a licence, it would be prepared to review its decision and to receive evidence on any changes in the supply situation of such applicants.

The following review applications were filed:

(a) Direct Energy applied on 29 March 1990 for a review of the Board's GH-1-89 Decision of 20 November 1989 in which Direct Energy's gas export licence application of 12 October 1988 was denied.

(b) Indeck applied on 30 March 1990 for a review of the Board's Decision of 20 November 1989 in which Indeck's gas export licence application of 14 February 1989 was denied.

(c) Shell applied on 22 March 1990 for a review of the Board's Decision of 20 November 1989 in which Shell's gas export licence application of 21 November 1988 was denied.

(d) WGML/TransCanada applied on 2 March 1990 for a review of the Board's Decision of 20 November 1989 in which WGML/TransCanada's gas export licence application of 14 February 1989 was denied.

(e) Niagara Mohawk Power Corporation ("NIMO") applied on 6 February 1990 for a review of the Board's Decision of 20 November 1989 in which WGML/TransCanada's gas export licence application of 14 February 1989 was denied.

The Board decided to hear these review applications by way of a public hearing and on 11 April 1990 issued Hearing Order GH-1-90, a copy of which is attached as Appendix I to these Reasons for Decision. The environmental screening of these licence applications, in accordance with the *Environmental Assessment Review Procedures Guidelines Order*, was conducted by way of a concurrent but separate written proceeding established by Board Order GHW-4-90. The details of that screening are reported in a separate document.

The GH-1-90 hearing was held in Calgary from 23 to 25 April 1990. The Board's decisions on each of the applications were read from the Bench on 25 April 1990, the day following the close of the hearing record. The following chapters set out those decisions and the reasons for them.

Chapter 2
Direct Energy Marketing Limited

By application dated 29 March 1990 Direct Energy applied, pursuant to subsection 21(l) of the *National Energy Board Act* ("the Act"), for a review of the portion of the GH-1-89 Reasons for Decision which pertains to the denial of a gas export licence to Direct Energy. Direct Energy requested that the reasons be varied to provide for the issuance of a licence to Direct Energy authorizing the export of gas at Philipsburg, Quebec. The gas would be delivered to Consolidated Fuel Company ("Consolidated") on the terms applied for in the Direct Energy export application dated 12 October 1988, except that the fifteen-year term of the applied-for export licence would now commence on 1 July 1991 and terminate on 30 June 2006.

Direct argued that the GH-1-89 Decision should be changed on two grounds:

(a) The Board's GHW-4-89 Decision constitutes changed circumstances which justify a review of the GH-1-89 Reasons for Decision.

(b) Direct Energy had added reserves to its gas supply in order to overcome the deficiencies in reserves and productive capacity which had been noted in the GH-1-89 Reasons for Decision.

2.1 Changed circumstances

In its GH-1-89 Decision the Board stated, *inter alia*, with respect to Direct Energy's application that it was "concerned with the terms and conditions of the Gas Sales Agreement" and that it was "of the view that the applied-for export is unlikely to generate net benefits to Canada".

Views of the Board

In its GHW-4-89 Decision the Board decided that it is not appropriate to use benefit-cost analysis as a determinative factor in gas export licensing. The Board also decided that, though it would continue to examine contracts underlying gas export applications to assure itself that they have commercial substance, it would operate on the presumption that, where contracts are freely negotiated at arm's length, they will be in the public as well as the private interest.

In view of the GHW-4-89 Decision, the Board agrees that Direct Energy's application should not be denied on the basis of the results of benefit-cost analysis. With regard to Direct Energy's contractual arrangements, the Board is satisfied that the contracts were freely negotiated at arm's length and finds no reason to intervene in the circumstances of this case.

2.2 Gas supply

In the GH-1-89 proceeding, Direct Energy had applied for a licence with a term volume of 936.2 10^6m^3 (33.0 Bcf). The Board's estimate of reserves[1] was 32 per cent lower than Direct Energy's estimate and 23 per cent lower than the applied-for term volume. The Board's projection of productive capacity implied that requirements would not be met at any time during the proposed licence term. The Board also noted that the gas purchase contracts between Direct Energy and its producer group were not supported by backstopping arrangements. Considering these factors, the Board was not satisfied that Direct Energy's gas supply arrangements supported the issuance of the requested licence.

At the time of the GH-1-89 hearing, a removal permit application had been submitted to the Alberta Energy Resources Conservation Board ("AERCB") and a decision was pending. No indication was given as to the status of the British Columbia removal authorization.

In its review application, Direct Energy submitted new evidence regarding gas supply. This evidence was subsequently revised and supplemented at the technical conference held on 23 April 1990 as part of the GH-1-90 proceeding. The new evidence on gas supply included the following changes relative to the supply evidence which had been reviewed by the Board in the GH-1-89 proceeding:

- deletion of Royal Trust Energy Corporation as a gas supplier to the project;
- substantially revised estimates of reserves, reflecting deletion of B.C. supply and significant additions to Alberta supply;
- revised productive capacity data, reflecting the above-mentioned changes in reserves;
- an update on the status of its AERCB removal permit authorization; and
- clarification of backstopping arrangements.

The Board's assessment of Direct Energy's revised gas supply evidence is provided in the following sections.

(i) Supply Contracts

Direct Energy has executed fifteen-year gas purchase contracts with four producers, namely, Blue Range Energy Corporation, Excel Energy Inc., Ranger Oil Limited and Venwest Resources Limited.

(ii) Reserves

Table 2-1 shows that the Board's estimate of reserves is 20 per cent lower than Direct Energy's estimate, but 30 per cent higher than the applied for term volume. The difference between the Board's and Direct Energy's estimates of reserves represents the cumulative effect of small differences in the

[1] The Board's assessment of Direct Energy's gas supply was described in Chapter 9 of the GH-1-89 Reasons for Decision.

estimates of reserves for individual pools. These differences arise primarily from differing interpretations of net pay, pool area and recovery factor.

Table 2-1

Comparison of Estimates of Direct Energy's Remaining Marketable Gas Reserves with the Applied-for Term Volume
10^6m^3 (Bcf)

Direct Energy	NEB	Applied-for Term Volume
1 529	1 216	936
(54)	(43)	(33)

(iii) Productive Capacity

Figure 2-1 compares the Board's and Direct Energy's projections of productive capacity with the applied-for volumes. Direct Energy's projection of productive capacity indicates that it can meet the applied-for volumes throughout the term of the proposed export. The Board's projection also indicates that productive capacity is expected to be sufficient to meet requirements throughout the proposed licence term.

Direct Energy stated that if shortfalls in gas supply were to occur, various backstopping provisions would take effect to ensure the adequacy of gas supply for the project. Direct Energy indicated that the individual producers were contractually obligated to provide the gas from other sources. In the event that this supply was unavailable, Direct Energy indicated that supply deficiencies would be remedied by other producers involved in the project, or by use of supply available from Direct Energy's corporate supply pool which would otherwise be used to serve interruptible markets.

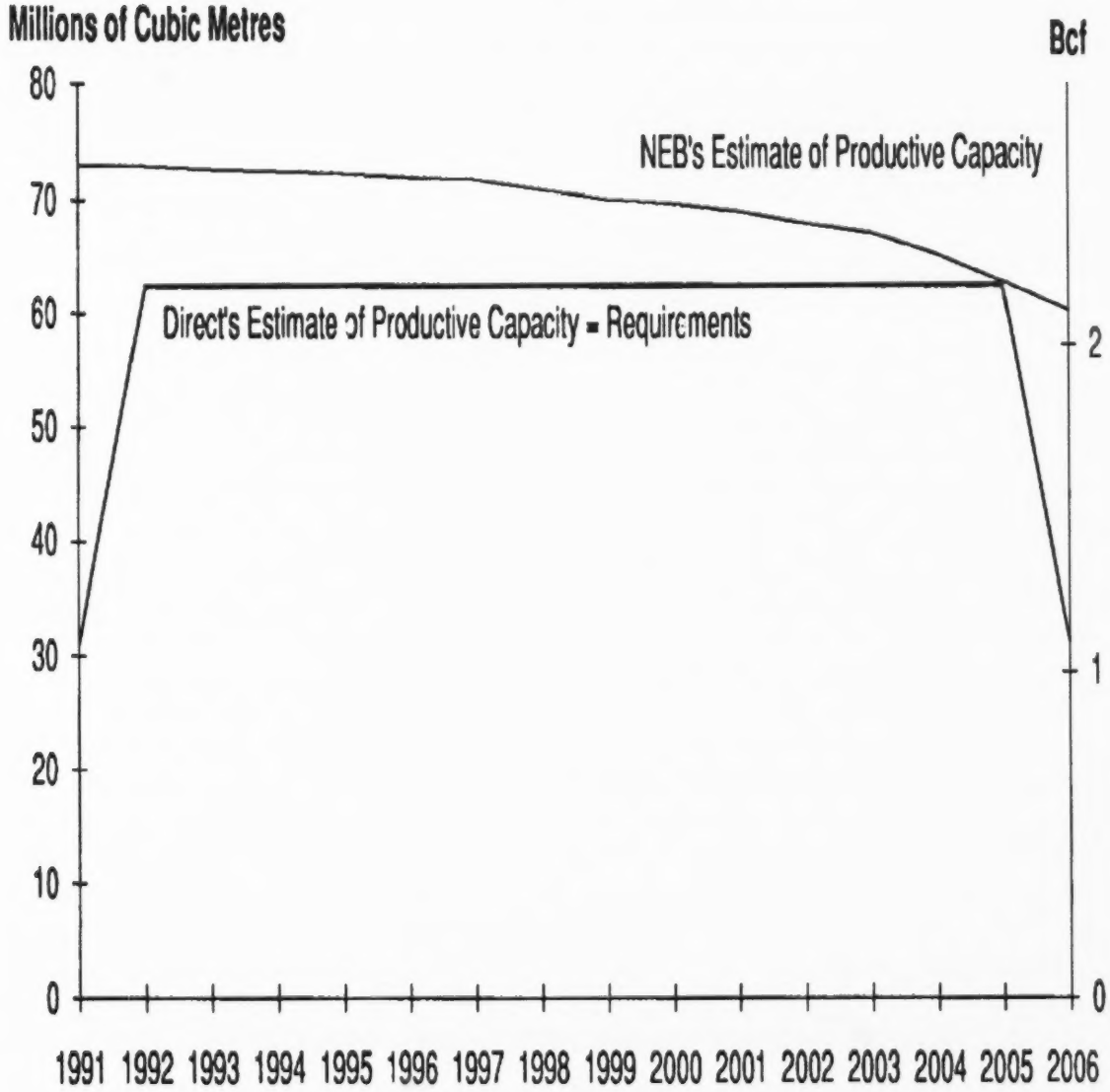
(iv) Energy Removal Authorization

Direct Energy stated that an energy removal application had been submitted to the AERCB and that the AERCB had recognized 1 104 10^6m^3 (39 Bcf) of gas reserves dedicated to the application. Direct Energy further advised that the Alberta Minister of Energy was recommending that removal authorization be granted for 936 10^6m^3 (33 Bcf) of natural gas and that approval was anticipated on 25 April 1990[1].

[1] The AERCB advised Direct Energy on 1 May 1990 that Permit No. GR90-15 had been granted.

FIGURE 2-1

COMPARISON OF DIRECT'S & NEB'S ESTIMATE OF ANNUAL PRODUCTIVE CAPACITY



Views of the Board

The Board is of the view that Direct Energy's gas supply is adequate to meet its requirements throughout the term of the proposed export licence.

2.3 Environmental Screening

An environmental screening of the application was conducted in the Board's GHW-4-90 proceeding. In that screening, the Board assessed the environmental effects of this export proposal, both upstream and downstream of TransCanada PipeLines Limited's ("TransCanada") facilities, as well as the effects arising from the construction and operation of new facilities on TransCanada's system.

The screening concluded that the potentially adverse environmental effects upstream and downstream of TransCanada's system, and any social effects directly related to those environmental effects associated with the export, would be insignificant or mitigable with known technology.

For the effects related to additions to TransCanada's system the Board notes that facilities in the province of Quebec that are required to transport the Direct Energy volumes to the international border were approved in the Board's GH-4-88 Decision. During the hearing leading to that Decision the proposed TransCanada facilities in Quebec were subject to an environmental assessment. The Board determined that the construction and operation of those facilities could be undertaken using known technology to mitigate any adverse effects.

The facilities have not been installed and, as a consequence, the approval lapsed in December 1989. The Board will have to consider a new application before re-issuing an approval for these facilities. If the facilities outlined in a new application differ from what was approved in the GH- 4-88 proceeding the Board would conduct an environmental screening of the changes. Since gas cannot be exported until a new application is considered, the Board is satisfied that the export licence can be issued at this time.

2.4 Disposition

In view of the changed circumstances resulting from the GHW-4-89 Decision and from the submission by Direct Energy of new evidence on gas supply, and in view of the results of the environmental screening, the Board has decided to issue a gas export licence to Direct Energy.

The terms and conditions of the licence to be issued are:

1. The term of this Licence shall commence on the date of Governor in Council approval hereof and end on 30 June 1992, unless exports commence hereunder on or before 30 June 1992, in which case the term will end on 30 June 2006.

2. Subject to condition 3, the quantity of gas that may be exported under the authority of this Licence shall not exceed:

   (a) 171 000 cubic metres in any one day;

(b) 62 400 000 cubic metres in any consecutive twelve-month period ending on 31 October; or

(c) 936 200 000 cubic metres during the term of this Licence.

3. (a) As a tolerance, the amount that Direct Energy may export in any 24-hour period under the authority of this Licence may exceed the daily limitation imposed in condition 2 by 10 per cent.

(b) As a tolerance, the amount that Direct Energy may export in any consecutive twelve-month period under the authority of this Licence may exceed the annual limitation imposed in Condition 2 by 2 per cent.

4. Gas exported under the authority of this Licence shall be delivered to the point of export near Philipsburg, Quebec.

Chapter 3
Indeck Gas Supply Corporation

By application dated 30 March 1990 Indeck applied, pursuant to subsection 21(1) of the Act, for a review by the Board of its decision in the GH-1-89 proceeding to deny a gas export licence to Indeck. Indeck had applied for a licence to export gas at Niagara Falls, Ontario for sale to two cogeneration projects in New York State - Indeck Energy Services of Oswego ("Indeck Oswego") and Indeck-Yerkes Energy Services, Inc. ("Indeck-Yerkes"). In its review application, Indeck requested that, pursuant to the Boar's 19 March 1990 correspondence, the Board vary its decision and issue to it the gas export licence for which it had applied on 14 February 1989, as amended. Indeck further requested that the Board review its estimate of Indeck's applied-for Alberta gas reserves.

Indeck argued that the GH-1-89 Decision should be changed on the grounds that:

(a) The Board's GHW-4-89 Decision constitutes changed circumstances which justify a review of the GH-1-89 Reasons for Decision.

(b) Indeck had supplemented data and information on its dedicated gas reserves.

3.1 Changed circumstances

In its GH-1-89 Decision the Board stated, *inter alia*, with respect to Indeck's application, that it was concerned "that certain of the terms and conditions of the Gas Sales and Purchase Agreements may not provide sufficient flexibility to allow adjustments to reflect changing market conditions". Further, the Board stated that it was "of the view that the applied-for exports are unlikely to generate net benefits to Canada".

Views of the Board

In its GHW-4-89 Decision the Board decided that it is not appropriate to use benefit-cost analysis as a determinative factor in gas export licensing. The Board also decided that, though it would continue to examine contracts underlying gas export applications to assure itself that they have commercial substance, it would operate on the presumption that, where contracts are freely negotiated at arm's length, they will be in the public as well as the private interest.

In view of the GHW-4-89 Decision, the Board agrees that Indeck's application should not be denied on the basis of the results of benefit-cost analysis. With regard to Indeck's contractual arrangements, the Board is satisfied that the contracts were freely negotiated at arm's length and finds no reason to intervene in the circumstances of this case.

3.2 Gas supply

In the GH-1-89 proceeding, Indeck had applied for a licence with a term volume of 3 500 $10^6 m^3$ (124 Bcf).

Indeck had separate gas supply arrangements for the Indeck Oswego and Indeck-Yerkes projects and the Board therefore examined Indeck's supply on a project-specific basis.[1] The Indeck Oswego project was to be supplied with Alberta gas under a fifteen year gas purchase arrangement with four producers, Northstar Energy Corporation ("Northstar"), Chesapeake Resources Ltd., Inverness Petroleum Ltd., and Universal Explorations Ltd. In addition, Bow Valley Industries Ltd. ("BVI") was to provide gas to Indeck Oswego from Saskatchewan, also under a fifteen-year purchase arrangement. The Indeck- Yerkes project was to be supplied with gas from Saskatchewan under a separate gas purchase arrangement with BVI and from Alberta by Northstar.

The Board was satisfied that the portion of the supply needed from Saskatchewan for both the Indeck Oswego and Indeck-Yerkes projects could be met. However, the Board was of the view that Indeck had not demonstrated sufficient supply to meet the portion of the supply needed from Alberta throughout the proposed licence term for either project. With respect to Alberta supply for the Indeck Oswego project, the Board's estimate of reserves was about 24 per cent lower than Indeck's estimate and slightly lower than the applied-for term volume. The Board's estimate of productive capacity was also lower than requirements over the latter portion of the proposed licence term. With respect to Alberta supply for the Indeck-Yerkes project, the Board's estimate of reserves was about 15 per cent lower than Indeck's estimate and 18 per cent less than the applied-for volumes. The Board's projection of productive capacity suggested that it would be deficient throughout the proposed licence term.

The Board also noted that Indeck had not offered any backstopping arrangements, nor any cross dedication of reserves from Saskatchewan to satisfy its total requirements.

At the time of the GH-1-89 hearing, energy removal authorizations from Alberta and Saskatchewan had been applied for and decisions were pending.

In its review application, Indeck submitted new evidence regarding gas supply. This evidence was further supplemented by submissions related to the Hangingstone Upper Mannville A pool and by evidence submitted at the technical conference held on 23 April 1990 as part of the GH-1-90 proceeding. The new evidence on gas supply included the following:

- relatively minor changes to certain of the reserves estimates for Alberta pools supplying the Indeck Oswego project;

- additional supporting information for the estimate of reserves for the Hangingstone Upper Mannville A pool, including reserves estimates from several consultants' studies; the AERCB evaluation of reserves for removal permit purposes; data on several wells which were not previously available to the Board; and information with respect to the geological and engineering evaluation of the pool;

- clarification of the status of provincial removal permit authorizations; and

- clarification of backstopping provisions.

The Board's assessment of Indeck's revised gas supply evidence is provided in the following sections.

---

[1] The Board's assessment of Indeck's gas supply was described in Chapter 4 of the GH-1-89 Reasons for Decision, issued December 1989.

(i) Supply Contracts

The gas supply arrangements for the Indeck Oswego and Indeck-Yerkes projects are unchanged from those outlined in the GH-1-89 proceeding and the Board has again examined Indeck's supply on a project-specific basis.

During the technical conference Indeck provided clarification regarding backstopping provisions. It was indicated that the Alberta producers have corporate contracts with Indeck and would backstop with other available reserves in the event of supply shortfalls. BVI indicated that it would consider backstopping Alberta supply from its Saskatchewan reserves but stated that this would be predicated on satisfactory contractual arrangements.

(ii) Reserves

Indeck Oswego Project

A comparison of the Board's and Indeck's revised estimates of reserves is provided in Table 3-1. The estimates of reserves from Saskatchewan from the Hatton Milk River and Medicine Hat pools are unchanged from the GH-1-89 analysis. BVI will be supplying both the Indeck Oswego and Indeck-Yerkes projects from these pools. The Board's estimate of reserves in Saskatchewan is similar to Indeck's estimate and far exceeds contractual requirements. The Board has updated its estimate of reserves for Alberta pools providing supply to the Indeck Oswego project to reflect more recent information. The Board's estimate of reserves is 12 per cent less than Indeck's estimate, but 6 per cent higher than the applied-for term volume. The difference between the Board's and Indeck's estimates of reserves represents the cumulative effect of small differences in the estimates of reserves for individual pools.

Table 3-1
Indeck Oswego Project:
Comparison of Estimates of
Indeck's Remaining Marketable Gas Reserves
With the Applied-for Term Volume
10^6m^3 (Bcf)

Province	Indeck	NEB	Applied-for Term Volume
Alberta	1 236 [1]	1 085	1 021
	(44)	(39)	(36)
Saskatchewan	13 428 [2]	13 330	821
	(474)	(473)	(29)
Total	14 664	14 415	1 842
	(518)	(512)	(65)

1. Indeck provided supplemental information and data on the Alberta reserves for Indeck Oswego in its 19 April 1990 submission. These included estimates by the AERCB (1 161 10^6m^3), McDaniel in February 1989 (1 377 10^6m^3) and McDaniel in October 1989 (1 215 10^6m^3). The estimate of 1 236 10^6m^3 was submitted by Indeck in the GH-1-89 proceeding and is within this range of estimates.
2. BVI's total uncommitted supply in the Hatton field which will also supply the Indeck-Yerkes project.

Indeck-Yerkes Project

A comparison of the Board's and Indeck's estimate of reserves is provided in Table 3-2.

The Board's estimate of reserves from the Hatton Milk River and Medicine Hat pools in Saskatchewan is very similar to that of Indeck and is unchanged from the GH-1-89 analysis.

Gas supply from Alberta for the Indeck-Yerkes project would be provided by Northstar from the Hangingstone Upper Mannville A pool. Northstar has dedicated 56 per cent of its interest in the pool to the Indeck application but indicated that it would be prepared to dedicate a higher percentage should that be required to satisfy the applied-for volumes[1]. The Board has increased its estimate of dedicated reserves from Alberta as a result of the additional information provided by Indeck in its review application and at the technical conference.

[1] Northstar could dedicate up to 72 per cent of its interest in the Hangingstone Upper Mannville A Pool to the Indeck-Yerkes project; 28 per cent of Northstar's interest in the pool is dedicated to an export application in the GH-5-89 proceeding.

Table 3-2
Indeck-Yerkes Project:
Comparison of Estimates of
Indeck's Remaining Marketable Gas Reserves
With the Applied-for Term Volume
10^6m^3 (Bcf)

Province	Indeck	NEB	Applied-for Term Volume
Alberta	746[1]	650	685
	(26)	(23)	(24)
Saskatchewan	13 428[2]	13 330	974
	(477)	(470)	(34)
Total	14 174	13 980	1 659
	(503)	(496)	(58)

1. Supplemental information and data on the Alberta gas reserves for Indeck-Yerkes were provided in Northstar's submission and at the technical conference. The reserves estimate of 746 10^6m^3 is that which was submitted by Indeck in the GH-1-89 proceeding and is within the range of estimates provided in the subsequent submissions.
2. BVI's total uncommitted supply in the Hatton field, which will also supply the Indeck Oswego project.

The Board's estimate of Alberta reserves is 13 per cent lower than Indeck's estimate and 5 per cent lower than the applied-for term volume.

The differences in the Board's and Indeck's estimates arise primarily from differing geological interpretations of the pool and from different views as to the extent to which the pool recovery factor will be affected by the underlying aquifer. While the Board has adopted a less optimistic view of these parameters than Indeck, it also recognizes that there is a range of plausible estimates of reserves for this pool, as reflected in the alternative technical interpretations documented in Northstar's submission and summarized in Table 3-3 below.

Table 3-3
Comparative Reserves Estimates For the
Hangingstone
Upper Mannville A Pool
10^6m^3 (Bcf)

	Northstar's Interest	Northstar's Interest Dedicated to Indeck -Yerkes @ 56%
Northstar	1 604	898
Hunter	1 432	802
McDaniel	1 418	794
AERCB	1 306	734
NEB	1 161	650
Coles	1 106	619

(iii) Productive Capacity

Indeck Oswego Project

Figure 3-1 compares the Board's and Indeck's projections of productive capacity with proposed export volumes for the Indeck Oswego project (including fuel on the TransCanada system). The Board believes that BVI could easily meet the contract rate, given the large volume of its reserves in Saskatchewan and, for analytical purposes, tracked the supply to the requirements. Any excess or deficiency in productive capacity appearing in Figure 3-1 therefore relates to the Alberta reserves.

Indeck was confident that it could meet the requirements throughout the proposed licence term, whereas the Board's analysis suggests that modest deficiencies in productive capacity could occur toward the end of the proposed licence term. The difference in outlook is attributable primarily to the difference in estimates of Alberta reserves.

Indeck-Yerkes

Figure 3-2 compares the Board's and Indeck's projections of productive capacity with the proposed export volumes for the Indeck-Yerkes project (including fuel on the TransCanada system). As was the case for the Board's analysis of productive capacity from Saskatchewan for the Indeck Oswego project, for analytical purposes the Board tracked the supply to the requirements and any deficiency in productive capacity appearing in Figure 3-2 relates to the Alberta reserves.

FIGURE 3-1

COMPARISON OF INDECK'S & NEB'S ESTIMATES OF ANNUAL PRODUCTIVE CAPACITY

OSWEGO PROJECT

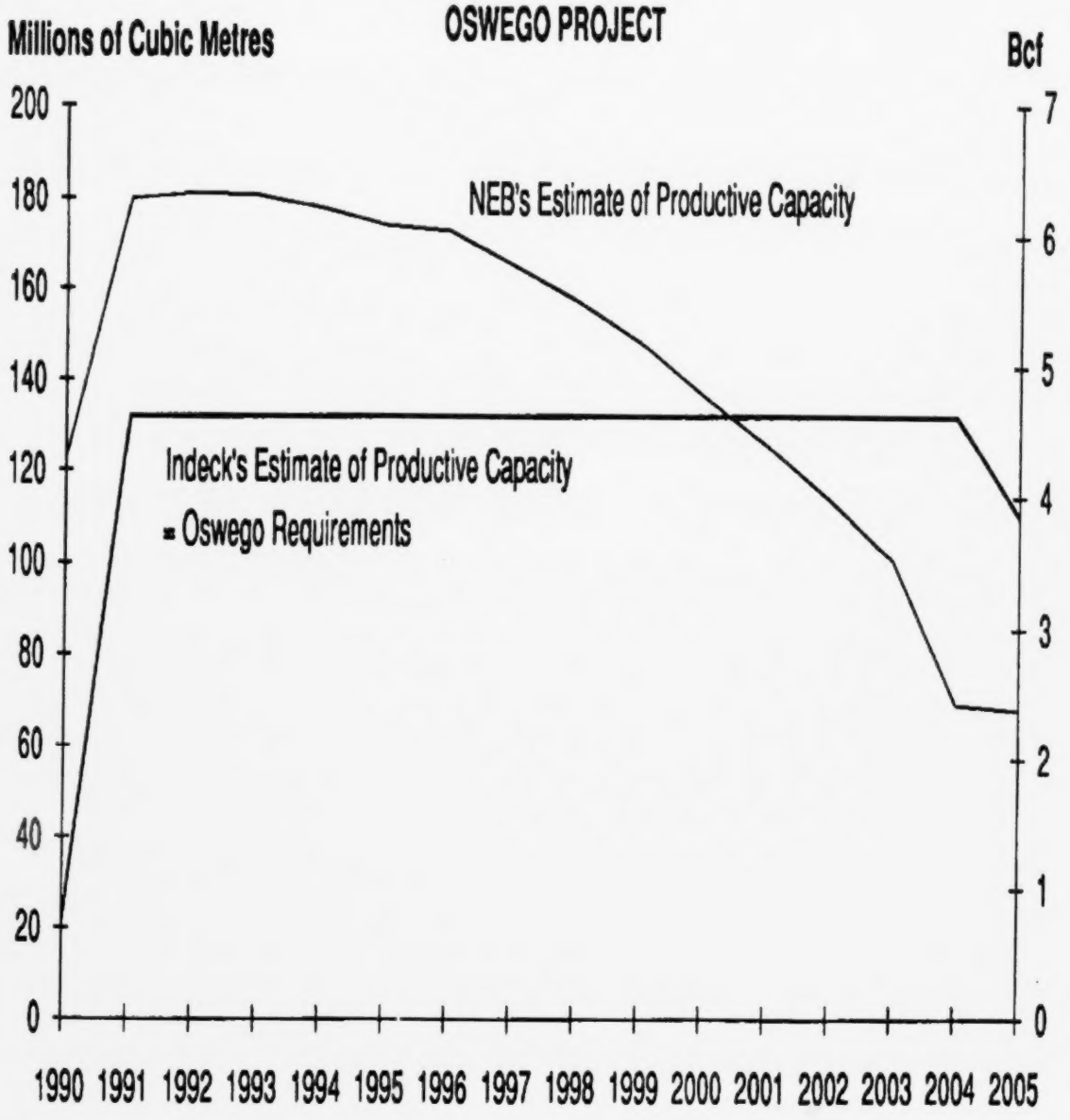
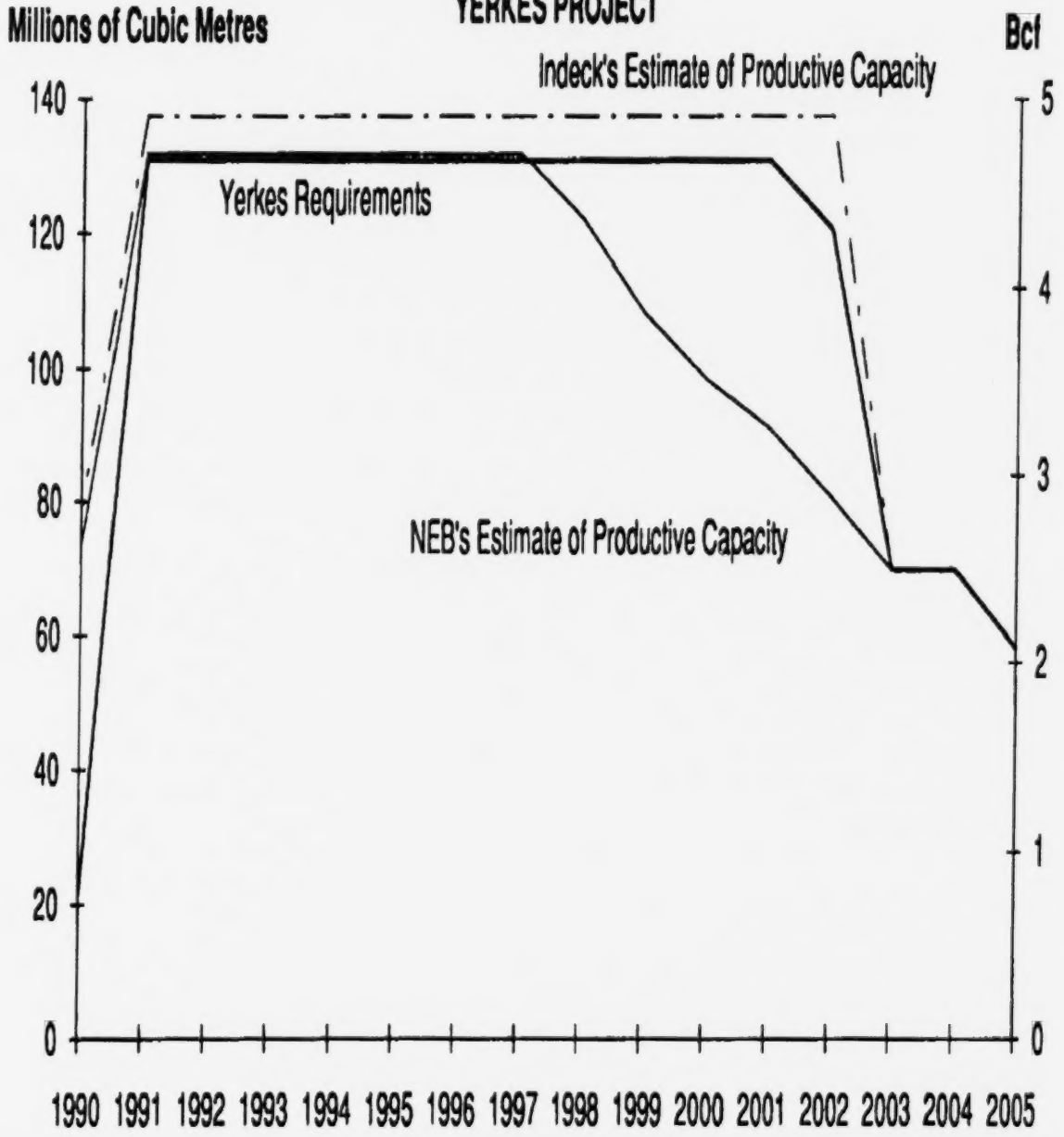


FIGURE 3-2

COMPARISON OF INDECK'S & NEB'S ESTIMATES OF ANNUAL PRODUCTIVE CAPACITY

YERKES PROJECT



Indeck's projection suggests adequate productive capacity throughout the proposed licence term. However, the Board's estimate of productive capacity suggests that deficiencies in productive capacity are likely to commence in 1998 and continue over the period to 2002. Again, this outlook is attributable primarily to the difference in estimates of reserves for the Hangingstone Upper Mannville A pool in the Province of Alberta.

(iv) Energy Removal Authorizations

Indeck Oswego Project

Energy removal authorizations from the provinces of Alberta and Saskatchewan have been applied for and decisions are pending. However, the AERCB indicated in a letter dated 15 March 1990 that gas reserves submitted by Indeck were sufficient to supply the applied-for removal permit volume of 1 100 10^6m^3.

Indeck-Yerkes Project

Energy removal authorizations from Alberta and Saskatchewan have been applied for. The AERCB issued a removal permit in November 1989 for 734 10^6m^3. The Saskatchewan approval is pending.

Views of the Board

Notwithstanding the estimated modest deficiencies in productive capacity from Alberta reserves for the Indeck Oswego project, the Board is satisfied with Indeck's supply arrangements.

The Board is satisfied that the portion of the supply needed from Saskatchewan for the Indeck-Yerkes project will be available over the proposed licence term.

The Board notes that, based on its assessment of reserves and productive capacity, supply from Alberta for the Indeck-Yerkes project may be somewhat deficient over the latter portion of the proposed licence term. Although Indeck indicated that Northstar was providing a corporate guarantee that it will meet its requirements, information provided in the review application and at the technical conference does not appreciably change the Board's views regarding the adequacy of Indeck's backstopping arrangements. However, given the relatively modest supply deficiencies and the potential for somewhat higher reserves and productive capacity than reflected in the Board's analysis, the Board is satisfied with the adequacy of supply for the Indeck-Yerkes project and does not consider it necessary to require that Northstar dedicate a higher percentage of its interest in the Hangingstone Upper Mannville A pool to the Indeck-Yerkes project.

3.3 Environmental Screening

An environmental screening of the application was conducted in the Board's GHW-4-90 proceeding. In that screening, the Board assessed the environmental effects of this export proposal including those related to the production, gathering, processing, transmission, distribution and proposed end use of the natural gas. The screening concluded that the potentially adverse environmental effects and any social effects directly related to those environmental effects associated with the export would be insignificant or mitigable with known technology.

3.4 Disposition

In view of the changed circumstances resulting from the Board's GHW-4-89 Decision, of the Board's consideration of the new evidence on Indeck's gas supply, and of the results of the environmental screening, the Board has decided to issue a gas export licence to Indeck.

The terms and conditions of the Licence to be issued are:

1. The term of this Licence shall commence on the date of Governor in Council approval hereof and end on 31 October 1991, unless exports commence hereunder on or before 31 October 1991, in which case the term will end on 31 October 2005.

2. Subject to condition 3, the quantity of gas that may be exported under the authority of this Licence shall not exceed:

   (a) 810 000 cubic metres in any one day;

   (b) 293 000 000 cubic metres in any consecutive twelve-month period ending on 31 October; or

   (c) 3 500 000 000 cubic metres during the term of this Licence.

3. (a) As a tolerance, the amount that Indeck may export in any 24-hour period under the authority of this Licence may exceed the daily limitation imposed in condition 2 by 10 per cent.

   (b) As a tolerance, the amount that Indeck may export in any consecutive twelve month period under the authority of this licence may exceed the annual limitation imposed in condition 2 by 2 per cent.

4. Gas exported under the authority of this licence shall be delivered to the point of export near Niagara Falls, Ontario.

Chapter 4
Shell Canada Limited

By application dated 22 March 1990 Shell applied, pursuant to subsection 21(l) of the Act, for a review of the GH-1-89 Reasons for Decision as they relate to the denial of Shell's export application. Shell requested that the Board determine that the proposed export is in the public interest and that the Board vary its Reasons for Decision to provide for the approval of an amendment to Licence GL-100 authorizing the export of gas at Niagara Falls, Ontario for delivery to Salmon Resources Ltd. for resale and delivery to Cogen Energy Technology Inc. ("CETI").

4.1 Changed circumstances

Shell argued that the Board had denied its export application solely on the basis of benefit-cost analysis and insufficient contractual flexibility and that, in view of the changed circumstances since the GHW-4-89 Decision, its application met all of the Board's current requirements for approval of a gas export licence.

Views of the Board

The Board agrees that, in its GH-1-89 Decision, it denied Shell's application on the basis of insufficient contractual flexibility and of the results of benefit-cost analysis.

In its GHW-4-89 Decision the Board decided that it is not appropriate to use benefit-cost analysis as a determinative factor in gas export licensing. The Board also decided that, though it would continue to examine contracts underlying gas export applications to assure itself that they have commercial substance, it would operate on the presumption that, where contracts are freely negotiated at arm's length, they will be in the public as well as the private interest.

In view of the GHW-4-89 Decision, the Board agrees that Shell's application should not be denied on the basis of the results of benefit-cost analysis. With regard to Shell's contractual arrangements, the Board is satisfied that the contracts were freely negotiated at arm's length and finds no reason to intervene in the circumstances of this case.

4.2 Environmental Screening

An environmental screening of the application was conducted in the Board's GHW-4-90 proceeding. In that screening, the Board assessed the environmental effects of this export proposal including those related to the production, gathering, processing, transmission, distribution and proposed end use of the natural gas. The screening concluded that the potentially adverse environmental effects and any social effects directly related to those environmental effects associated with the export would be insignificant or mitigable with known technology.

4.3 Disposition

The Board agrees that, in view of the changed circumstances resulting from the GHW-4-89 Decision and of the results of the environmental screening, Shell's application meets all of the current

requirements for approval of a gas export licence. Accordingly, the Board has decided to vary its GH-1-89 Decision relating to Shell's application.

Although Shell requested approval, pursuant to subsection 21(2) of the Act, to amend gas export Licence GL-100, the Board has decided that it would be preferable to issue a new licence to Shell rather than further amend Licence GL-100.

The terms and conditions of the licence that would be issued to Shell Canada Limited are:

1. The term of this Licence shall commence on the date of Governor in Council approval hereof and end on 31 May 1992, unless exports commence hereunder[1] on or before 31 May 1992, in which case the term will end on 31 August 2011.

2. Subject to condition 3, the quantity of gas that may be exported under the authority of this Licence shall not exceed:

   (a) 450 000 cubic metres in any one day;

   (b) 145 000 000 cubic metres in any consecutive twelve-month period ending on 31 October; or

   (c) 2 755 000 000 cubic metres during the term of this Licence.

3. (a) As a tolerance, the amount that Shell may export in any 24-hour period under the authority of this Licence may exceed the daily limitation imposed in Condition 2 by 10 per cent.

   (b) As a tolerance, the amount that Shell may export in any consecutive twelve month period under the authority of this Licence may exceed the annual limitation imposed in Condition 2 by 2 per cent.

4. Gas exported under the authority of this Licence shall be delivered to the point of export near Niagara Falls, Ontario.

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[1] Shell, in its application had requested that the term of its export authorization commence on 31 May 1991. In a letter to the Board dated 7 May 1990 it requested that the date for the required commencement of exports be changed to 31 May 1992. The Board agrees that the date should be changed to 31 May 1992.

Chapter 5
Western Gas Marketing Limited as agent for TransCanada Pipelines Limited

By application dated 2 March 1990, WGML/TransCanada applied to the Board requesting a review and variation of the Board's decision in the GH-1-89 proceeding which denied an application by WGML/TransCanada, dated 14 February 1989, to export gas to NIMO. NIMO had also applied on 6 February 1990 for a review and variation of this same Decision.

To accommodate this export, TransCanada proposes to construct new facilities, known as the Gananoque extension, near Kingston, Ontario. These new facilities were considered in the GH-1-89 proceeding. By letter dated 2 August 1989 the Board informed parties that the proposed Gananoque extension would be required only in the event that the WGML/TransCanada export licence application was approved. The Board also indicated that if the export application was approved, the GH-1-89 hearing would be reopened to hear further evidence related to the Gananoque extension. In its decision of 20 November 1989, the Board denied WGML/TransCanada's export licence application. On the same date, the Board advised TransCanada that its application for a certificate in respect of the Gananoque extension was denied and that the GH-1-89 proceeding would therefore not be reopened.

By letter dated 9 March 1990 TransCanada requested that the Board rescind its decision to deny the proposed Gananoque extension if a gas export licence was granted to WGML/TransCanada following a review. On 20 March 1990, the Board advised TransCanada that, in the event the Board decided to grant an export licence to WGM/TransCanada, the Board intended to hold a further public hearing to address concerns related to the Gananoque extension.

5.1 Changed Circumstances

In a letter dated 27 March 1990, WGML/TransCanada submitted that the denial with respect to the proposed NIMO export had been based entirely on benefit-cost and contractual flexibility considerations and that, in view of the GHW-4-89 Decision, a review and variation were warranted.

Views of the Board

The Board agrees that, in its GH-1-89 Decision, it denied WGML/TransCanada's application on the basis of insufficient contractual flexibility and of the results of benefit-cost analysis.

In its GHW-4-89 Decision the Board decided that it is not appropriate to use benefit-cost analysis as a determinative factor in gas export licensing. The Board also decided that, though it would continue to examine contracts underlying gas export applications to assure itself that they have commercial substance, in regard to contract flexibility it would operate on the presumption that, where contracts are freely negotiated at arm's length, they will be in the public as well as the private interest.

In view of the GHW-4-89 Decision, the Board agrees that WGML/TransCanada's application should not be denied on the basis of the results of benefit-cost analysis. With regard to WGML/TransCanada's contractual arrangements, the Board is satisfied that the contracts were freely negotiated at arm's length and finds no reason to intervene in the circumstances of this case.

5.2 Environmental Screening

An environmental screening of the application was conducted in the Board's GHW-4-90 proceeding. In that screening, the Board assessed the environmental effects of this export proposal, both upstream and downstream of TransCanada's facilities, as well as the effects arising from the construction and operation of new facilities on TransCanada's system. The Board concluded that:

(1) the potentially adverse environmental effects upstream and downstream of TransCanada's system, and any social effects directly related to those environmental effects associated with the export, would be insignificant or mitigable with known technology; and

(2) the potentially adverse environmental effects of TransCanada's proposed Gananoque extension facilities are not fully known at this time and, in particular, the Board is aware of significant public concern about the impact of the proposed facilities.

Since the environmental and routing information related to the Gananoque extension has yet to be filed in a facilities application, the Board is not in a position to determine what the full environmental effects may be or what specific measures could be taken to mitigate them. In this regard, the Board will convene a public hearing under Part III of its Act at which it will consider all the environmental effects related to those facilities, including concerns raised by the interested parties, before reaching a decision on TransCanada's facilities application. The facilities application hearing is the most appropriate forum in which to consider environmental concerns as detailed evidence on the facilities will be available at that time.

These additional facilities on TransCanada's system are an essential part of this export proposal and no gas related to the proposal can be exported unless they are approved and constructed. Further, TransCanada cannot begin the facilities construction without the approval of the Board, which must be obtained through the previously described facilities application procedure. This second process ensures that a complete assessment of the environmental effects will be made before the matter of facilities construction is decided. Because of this assurance, the Board is satisfied that the issuance of the requested licence at this time will not in any way affect that subsequent examination. In addition, the Board has included in the licence a sunset provision under which the licence will expire on 31 October 1991 should gas not flow by that time.

5.3 Disposition

In view of the changed circumstances resulting from the GHW-4-89 Decision the Board has decided to issue a gas export licence to WGML/TransCanada.

The terms and conditions of the licence that would be issued to WGML/TransCanada are:

1. The term of this Licence shall commence on the date of Governor in Council approval hereof and end on 31 October 1991, unless exports commence hereunder on or before 31 October 1991, in which case the term will end on 31 October 2005.

2. Subject to condition 3, the quantity of gas that may be exported under the authority of this Licence shall not exceed:

   (a) 1 445 000 cubic metres in any one day;

(b) 529 000 000 cubic metres in any consecutive twelve-month period ending on 31 October; or

(c) 7 910 000 000 cubic metres during the term of this Licence.

3. (a) As a tolerance, the amount that WGML/TransCanada may export in any 24-hour period under the authority of this Licence may exceed the daily limitation imposed in condition 2 by 10 per cent.

(b) As a tolerance, the amount that WGML/TransCanada may export in any consecutive twelve-month period under the authority of this Licence may exceed the annual limitation imposed in Condition 2 by 2 per cent.

4. Gas exported under the authority of this licence shall be delivered to a point of export at or near Gananoque, Ontario, or such other point as the Board may determine.

The foregoing chapters constitute our Reasons for Decision in respect of the GH-1-90 review.

D.B. Smith
Presiding Member

W.G. Stewart
Member

C. Bélanger
Member

Ottawa, Canada
June 1990

Appendix I

File No.: 7205-M93-4-2
11 April 1990

VIA TELECOPIER

To: Interested Parties to Order GH-1-89

Re: Review of Applications for Gas Export Licences from Direct Energy Marketing Limited, Indeck Gas Supply Corporation, Niagara Mohawk Power Corporation, Shell Canada Limited, and Western Gas Marketing Limited as agent for TransCanada PipeLines Limited

Attached is a copy of Hearing Order GH-1-90 setting out the Directions on Procedure to be followed in the above-noted review. Interested parties are asked to note that interventions are required to be filed with the Secretary by 17 April 1990.

Yours truly,

Marie Tobin
Secretary

Attach.

File No.: 7205-M93-4-2
11 April 1990

Hearing Order No. GH-1-90
Directions on Procedure

Review of Applications for Gas Export Licences from Direct Energy Marketing Limited, Indeck Gas Supply Corporation, Niagara Mohawk Power Corporation, Shell Canada Limited, and Western Gas Marketing Limited as agent for TransCanada PipeLines Limited

In the Board's decision in the GHW-4-89 proceeding, which was released on 15 March 1990, the Board decided that it would no longer use benefit-cost analysis in considering applications pursuant to Part VI of the *National Energy Board Act*. The Board also decided that, in implementing the criterion relating to contract flexibility, it would generally operate on the presumption that, where contracts are freely negotiated at arm's length, they would be in the public as well as private interest. The Board indicated that it would intervene in respect of contract flexibility only in exceptional circumstances.

In its letter of 19 March 1990 to parties of record in GH-8-88 and GH-1-89, the Board indicated that, in the light of the changed circumstances arising from its GHW-4-89 decision, it would be prepared to review certain past decisions. A review would be conducted in cases where, in the view of applicants, there was an adverse decision on the basis of benefit-cost analysis or insufficient contractual flexibility to allow adjustments to reflect changing market conditions. In cases where supply was cited as a reason for denial of a licence, the Board stated that it would be prepared to review its decision and to receive evidence on any changes in the supply situation of such applicants.

The Board has received applications for review from the following companies:

(a) Direct Energy Marketing Limited ("Direct Energy"), application dated 29 March 1990 for a review of the Board's GH-1-89 decision of 20 November 1989 in which Direct Energy's gas export licence application of 12 October 1988 was denied.

(b) Indeck Gas Supply Corporation ("Indeck"), application dated 30 March 1990 for a review of the Board's decision of 20 November 1989 in which Indeck's gas export licence application of 14 February 1989 was denied.

(c) Niagara Mohawk Power Corporation ("NIMO"), application dated 6 February 1990 for a review of the Board's decision of 20 November 1989 in which Western Gas Marketing Limited as agent for TransCanada PipeLines Limited's gas export licence application of 14 February 1989 was denied.

(d) Shell Canada Limited ("Shell"), application dated 22 March 1990 for a review of the Board's decision of 20 November 1989 in which Shell's gas export licence application of 21 November 1988 was denied.

(e) Western Gas Marketing Limited as agent for TransCanada PipeLines Limited ("WGML/TransCanada"), application dated 2 March 1990 for a review of the Board's decision of 20 November 1989 in which WGML/TransCanada's gas export licence application of 14 February 1989 was denied.

The Board has decided to hold a public hearing to deal with these applications which will be conducted in accordance with the following directions on procedure.

The Board notes that this proceeding will not deal with TransCanada's application for a certificate in respect of the Gananoque extension. In its letter of 20 March 1990 to TransCanada the Board stated:

> "In the event that the Board decides to grant an export licence to WGM/TransCanada, the Board intends to hold a further public hearing to address concerns related to the proposed Gananoque Extension. Should such a hearing become necessary, the Board will issue a further hearing order, providing additional information on procedural matters and identifying the issues to be addressed."

Public Viewing

1. Each applicant shall deposit and keep on file, for public inspection during business hours in its offices at the following locations a copy of its previously considered application as well as its written evidence and responses to information requests filed in GH-1-89 together with its application for review.

Direct Energy
1580 Guiness House
727-7th Avenue S.W.
Calgary, Alberta
and
45 Sheppard Avenue East
Willowdale, Ontario

Indeck
c/o Bow Valley Industries Ltd.
1800, 321 Sixth Avenue S.W.
Calgary, Alberta

NIMO
c/o Messrs. Cassels, Brock & Blackwell
Barristers and Solicitors
Scotia Plaza
2100-40 King Street West
Toronto, Ontario

Shell
400-4th Avenue S.W.
Calgary, Alberta

WGML/TransCanada
530-8th Avenue S.W.
Calgary, Alberta

Copies of the applications are also available for viewing in the Board's offices at the following locations:

Library
Room 962
473 Albert Street
Ottawa, Ontario
and
4500 - 16th Avenue N.W.
Calgary, Alberta

Hearing

2. The public hearing will commence on Monday, 23 April 1990 at 8:30 a.m. local time at the Glenmore Inn, 2720 Glenmore Trail S.E., Calgary Alberta, and will continue until 12:30 p.m. on that day. On following days the hearing will be between 1:30 p.m. and 5:30 p.m.

Interventions

3. Interventions are required to be filed with the Secretary and served on the applicants by 17 April 1990. Interventions should include all the information set out in subsection 32(l) of the revised draft *NEB Rules of Practice and Procedure* dated 21 April 1987.

4. Intervenors are reminded that by its *Reasons for Decision in the Matter of a Review of the Natural Gas Surplus Determination Procedures* dated July 1987, the Board made a complaints procedure available to Canadian gas-users. This allows a domestic gas-user to object to an export on the grounds that it cannot obtain additional supplies of gas under contract on terms and conditions, including price, similar to those contained in the export proposal.

5. The Secretary will issue a list of intervenors shortly after 17 April 1990.

Evidence and Testimony to be Incorporated for these Proceedings

6. For purposes of this proceeding the Board will incorporate and rely on the hearing record of the GH-1-89 proceeding.

Written Evidence of Applicants and Intervenors

7. Any additional written evidence that the applicants wish to present shall be filed with the Secretary and served on all other parties to the proceeding by 20 April 1990.

8. Intervenor written evidence is required to be filed with the Secretary and served on all other parties to the proceeding by 20 April 1990.

Letters of Comment

9. Letters of comment are required to be filed with the Secretary by 20 April 1990.

Environmental Screening Process

10. Directions on environmental screening in accordance with the *Environmental Assessment and Review Process Guidelines Order* will be issued shortly.

Technical Conference on Direct Energy and Indeck's Gas Supply Evidence

11. The Board has decided that, immediately following the opening of the hearing on 23 April 1990, it will convene a technical conference to discuss the new supply evidence filed as part of Direct Energy and Indeck's applications for review. Further directions with respect to the conduct of this technical conference are attached as Appendix I.

Service to Parties

12. The Board has served a copy of this order on the parties listed in Appendix II.

Filing and Service Requirements

13. Where parties are directed by these Directions on Procedure or by the revised draft *NEB Rules of Practice and Procedures* to file or serve documents on other parties, the following number of copies shall be served or filed;

    (1) for documents to be filed with the Board, provide 35 copies;

    (2) for documents to be served on the applicants, provide 3 copies;

    (3) for documents to be served on intervenors, provide 1 copy.

14. Parties filing or serving documents at the hearing shall provide 5 copies to the Hearing Clerk, 5 copies to Board counsel and shall have a sufficient number of copies of the documents for use by other parties present at the hearing.

15. Persons filing letters of comment shall serve one copy on each of the applicants and file one copy with the Board which in turn will provide copies for all other parties.

16. Parties filing or serving documents fewer than five days prior to the commencement of the hearing shall also bring to the hearing a sufficient number of copies of the documents for use by the Board and other parties present at the hearing.

Simultaneous Interpretation

17. All parties are requested to indicate in their interventions the official language they intend to use at the hearing. If it appears that both languages will be used, simultaneous interpretation will be provided.

General

18. All parties are asked to quote Hearing Order No. GH-1-90 and File No. 7205-M93-4-2 when corresponding with the Board in this matter.

19. For the purpose of these proceedings the Board adopts the revised draft *NEB Rules of Practice and Procedure* dated 21 April 1987, as supplemented by the directions on procedure in this Hearing Order.

20. For information on this hearing, or the procedures governing the hearing, contact Vivien St. George, Regulatory Support Officer, at (613) 998-7196.

Marie Tobin
Secretary

Appendix I To
Order G H-1 -90

Further Directions on the Technical
Conference on the Supply Evidence Filed
by Direct Energy Marketing Limited's
("Direct Energy")
and Indeck Gas Supply Corporation's
("Indeck")

As indicated in paragraph 11 of Hearing Order GH-1-90, the Board will convene a technical conference on 23 April 1990 to discuss the new gas supply evidence submitted as part of the applications for review filed by Direct Energy and Indeck. The conference will be conducted in the following manner:

1. The conference will take place in the Hearing Room following the opening of the proceedings.

2. The purpose of the conference is to allow the above-noted applicants to present new gas supply evidence in a less formal setting to allow interested parties, Board staff and the Board members an opportunity to discuss matters of concern related to the evidence.

3. As this portion of the Hearing is intended to be less formal, the Board does not consider it necessary for the applicant's witnesses to be sworn. A transcript of the proceedings will be kept, and the information that is adduced during the conference will form part of the record upon which the Board will reply in making its decision on the applications.

4. To ensure that the time is used efficiently, interested parties who wish participate and ask questions of the applicants will be called upon in accordance with the Order of Appearances that will be distributed at the start of the hearing.

5. Questions concerning other matters associated with the applications and final argument will not be dealt with during the conference. Parties will have an opportunity for those matters later in the proceeding during the hearing of Direct Energy's and Indeck's applications.

The Board is using the technical conference approach on the gas supply data with the expectation that it will assist the Board and parties in gaining a better understanding of this technical evidence and thereby reduce the hearing time required for cross-examination.

Appendix 11 to
Order GH-1-90

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Parties to the TransCanada PipeLines Limited 1989/90 Facilities Hearing held under Board Order GH-1-89